

## REMARKS

Claims 1-48 were presented for examination and were pending in this application. In an Official Action dated October 20, 2005, claims 1-48 were rejected.

Claims 12, 14, 38, 40, 43, and 48 are amended herein, and claims 1-11, 28-37, 42, and 44-47 are canceled herein without prejudice or disclaimer. No new matter is added by this amendment. Claims 12-27, 38-41, 43, and 48 are now pending.

### Summary of Substance of Interview

Applicant's representatives, Rajiv Patel (Reg. No. 39,327) and Jae Won Song (Ltd. Rec. No. L0203) had a telephone interview with Examiners Ranodhi Serrao and Le Luu on January 17, 2006 to discuss the Office Action. Claims 12, 38, 43, and 48 and the cited references Vo (US Patent Application Publication No. 2003/0229692 A1) and Bharat (US Patent No. 6,526,440) were discussed. The Examiners also brought up an article, "The Anatomy of a Large-Scale Hypertextual Web Search Engine, by Sergey Brin and Lawrence Page" ("Brin and Page Article") which is briefly mentioned in col. 1, lines 44-51 of Bharat. However, the Examiners agreed that the Brin and Page Article was neither specifically relied upon nor discussed in the Office Action, and agreed to make any future office action non-final if such future office action, if any, relies on the Brin and Page Article.

Applicant's representatives explained that neither Vo nor Bharat discloses or even suggests the claim limitation, ranking the web pages at least in part based upon the popularity of the retrieved web pages where the popularity of the retrieved web pages is proportionate to the actual number of visits to the web pages as determined from and indicated by information

extracted from packets traversing the network, as recited in claims 12, 38, 43, and 48. No particular agreement was reached with respect to the cited art.

Applicant's representatives also added that the page rank concept disclosed in the Brin and Page Article is completely different from this claim limitation, because page rank is a mere measure of indicating the number of citations or links from one web page to another web page, as opposed to the actual number of visits to a particular web page as indicated by information extracted from packets traversing the network as recited in claims 12, 38, 43, and 48.

The Examiners invited the Applicant to submit a written response to the Office Action discussing such distinctions.

The Examiners also agreed that the objections to the drawings (Figs. 1 and 9) will be withdrawn, because the characters "3" and "5" in Fig. 1 and "4" in Fig. 9 are not reference numerals but rather indicate the score of a web page being divided over its links to other web pages.

#### Objection to the Drawings

In paragraph 1 of the Office Action, the Examiner objected to Figures 1 and 9, because "3" and "5" in Fig. 1 and "4" in Fig. 9 correspond to multiple items. The Examiner agreed to withdraw this objection in the interview, because the characters "3" and "5" in Fig. 1 and "4" in Fig. 9 are not reference numerals but rather indicate the score of a web page being divided over its links to other web pages. Thus, this objection is overcome.

### Claim Rejections under 35 U.S.C. §112, Second Paragraph

In paragraphs 2-4 of the Office Action, the Examiner objected to claims 1, 12, 14, 28, 38, 40, 42, 43, 47, and 48 as being indefinite, because they recite the terms “substantially” and “relative.” Claims 12, 14, 38, 40, 43, and 48 are amended herein to delete “substantially” and “relative,” and claims 1, 28, 42, and 47 are canceled herein. Thus, the rejection of these claims is overcome.

### Claim Rejections under 35 U.S.C. §102

In paragraphs 5-10 of the Office Action, claims 1-3, 42, and 47 were rejected as being anticipated by Vo. Claims 1-3, 42, and 47 are canceled herein, and thus the rejection of these claims is overcome.

In paragraph 11 of the Office Action, claim 38 was rejected as being anticipated by Bharat. This rejection is traversed.

Claim 38 is directed to a method for ranking Internet search results, and recites:

“...ranking the web pages at least in part based upon the popularity of the retrieved web pages, the popularity of the retrieved web pages being determined based upon information extracted from packets traversing the Internet and being proportionate to actual number of visits to the web pages as indicated by the extracted information.”

Bharat does not disclose or even suggest ranking web pages retrieved from Internet searches based upon the popularity of the retrieved web pages, where the popularity is determined based upon information extracted from packets traversing the Internet and is proportionate to actual number of visits to the web pages as indicated by the extracted

information. Rather, Bharat merely discloses ranking Internet search results based upon the relevance and the relative position of the search term in the returned documents. See Bharat, col. 3, lines 29-52. Nowhere does Bharat even mention ranking web pages retrieved from Internet searches based upon how many times the retrieved web pages is actually visited as determined and indicated by information extracted from packets traversing the network.

Therefore, it is respectfully submitted that claim 38 is patentably distinct from Bharat.

Also, although the Office Action never explicitly relies or mentions the page rank concept disclosed in the Brin and Page Article, it should be noted that the page rank concept disclosed in the Brin and Page Article is completely different from the invention of claim 38, because page rank is a mere measure of indicating the number of citations or links from one web page to another web page, which link may not necessarily be actually traversed and which is not determined based upon information extracted from packets traversing the network. This is completely different from ranking the web pages based upon the actual number of visits to a particular web page as indicated by information extracted from packets traversing the network as recited in claim 38.

#### Claim Rejections under 35 U.S.C. §103

In paragraphs 12-18 of the Office Action, Claims 4-6, 8, 31-33, 44, and 46 were rejected as being obvious over Vo in view of Pulley (U.S. Patent Application Publication No. 2002/0087679). Claims 4-6, 8, 31-33, 44 and 46 are canceled herein, and thus the rejection of these claims is overcome.

In paragraph 19 of the Office Action, claims 9 and 34 were rejected as being obvious over Vo and Pulley in view of Matsliach (U.S. Patent No. 6,879,994). Claims 9 and 34 are canceled herein, and thus the rejection of these claims is overcome.

In paragraph 20 of the Office Action, claims 10 and 35 were rejected as being obvious over Vo, Pulley, and Matsliach and further in view of Pulley. Claims 10 and 35 are canceled herein, and thus the rejection of these claims is overcome.

In paragraph 21-23 of the Office Action, claims 7, 11, 36, and 37 were rejected as being obvious over Vo and Matsliach in view of Sehm (U.S. Patent Application Publication No. 2005/0021731). Claims 7, 11, 36, and 37 are canceled herein, and thus the rejection of these claims is overcome.

In paragraphs 24-31 of the Office Action, claims 12-17, 39-41, 43, 45 and 48 were rejected as being obvious over Vo and Bharat. This rejection is traversed.

Independent claims 12 and 43 are directed to a search system and variously recite:

“...monitoring packets traversing the network and extracting  
information on the packets;  
... analyzing the extracted information and determining the  
popularity of the web pages based upon the extracted information,  
the popularity of the web pages being proportionate to actual number  
of visits to the web pages as indicated by the extracted information;  
and  
... ranking the web pages at least in part based upon the popularity  
of the retrieved web pages.”

Also, independent claim 48 is also directed to a search system and recites:

“...monitoring packets traversing the network and extracting information on the packets;  
... analyzing the extracted information and determining the popularity of the links from a first web page to a plurality of second web pages based upon the extracted information, the popularity of each of the links being proportionate to actual number of times each of the links is actually traversed as indicated by the extracted information; and  
...propagating a score of the first web page to the second web pages to which the first web page is linked in proportion to the popularity of links from the first web page to each of the second web pages.”

As the Examiner admits in paragraph 25 of the office action, Vo fails to disclose or even suggest (i) ranking web pages retrieved from Internet searches based upon the popularity of the retrieved web pages, where the popularity is determined based upon information extracted from packets traversing the Internet and is proportionate to actual number of visits to the web pages as indicated by the extracted information, as recited in claims 12 and 43, and (ii) propagating a score of the first web page to the second web pages to which the first web page is linked in proportion to the popularity of links from the first web page to each of the second web pages, where the popularity of the links from the first web page to the second web pages is determined based upon information extracted from

packets traversing the Internet and is proportionate to the actual number of times each of the links is actually traversed as indicated by the extracted information, as recited in claim 48.

Bharat also fails to disclose or even suggest (i) ranking web pages retrieved from Internet searches based upon the popularity of the retrieved web pages, where the popularity is determined based upon information extracted from packets traversing the Internet and is proportionate to the actual number of visits to the web pages as indicated by the extracted information, as recited in claims 12 and 43, and (ii) propagating a score of the first web page to the second web pages to which the first web page is linked in proportion to the popularity of links from the first web page to each of the second web pages, where the popularity of the links from the first web page to the second web pages is determined based upon information extracted from packets traversing the Internet and is proportionate to the actual number of times each of the links is actually traversed as indicated by the extracted information, as recited in claim 48. Rather, Bharat merely discloses ranking Internet search results based upon the relevance and the relative position of the search term in the returned documents. See Bharat, col. 3, lines 29-52. Nowhere does Bharat even mention ranking web pages from an Internet search or propagating scores from one web page to another web page based upon how many times the retrieved web pages or links are actually visited or traversed as determined and indicated by information extracted from packets actually traversing a network.

To establish *prima facie* obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. See MPEP §2143.03. The deficient disclosures of Vo and Bharat preclude the Examiner from establishing even a *prima facie* basis from

which a proper determination of obviousness of claims 12, 43, and 48 can be made.

Therefore, it is respectfully submitted that independent claims 12, 43, and 48 are patentably distinct from Vo and Bharat.

Also, although the Office Action never explicitly relies or mentions the page rank concept disclosed in the Brin and Page Article, it should be noted that the page rank concept disclosed in the Brin and Page Article is completely different from the inventions of claims 12, 43, and 48, because page rank is a mere measure of indicating the number of citations or links from one web page to another web page, which link may not necessarily be actually traversed and which is not determined based upon information extracted from packets traversing the network. This is completely different from ranking the web pages based upon the actual number of visits to a particular web page as indicated by information extracted from packets traversing the network as recited in claims 12, 43, and 48.

Claims 13-17 and 39-41 are dependent from independent claims 12 and 38, respectfully, and thus are patentably distinct from Vo and Bharat for at least the same reasons as explained above with respect to claims 12 and 38.

Claim 45 is canceled herein, and thus the rejection of claim 45 is also overcome.

In paragraphs 32-36 of the Office Action, claims 18-20 and 22 were rejected as being obvious over Vo and Bharat in view of Pulley. This rejection is traversed.

Claims 18-20 and 22 are dependent directly or indirectly from independent claim 12, and thus all arguments raised above with respect to Vo and Bharat in connection with claim 12 equally applies to claims 18-20 and 22. Furthermore, Pulley also fails to disclose or even suggest ranking web pages retrieved from Internet searches based upon the popularity of the



retrieved web pages, where the popularity is determined based upon information extracted from packets traversing the Internet and is proportionate to the actual number of visits to the web pages as indicated by the extracted information, as recited in claim 12 from which claims 18-20 and 22 depend. In fact, the Examiner merely relied on Pulley for the alleged disclosure of particular information (e.g., URLs and IP addresses) contained in Internet packets, but Pulley has nothing to do with ranking web pages retrieved from Internet searches based upon the popularity of the retrieved web pages as indicated by the information extracted from packets traversing the network.

The deficient disclosures of Vo, Bharat, and Pulley preclude the Examiner from establishing even a *prima facie* basis from which a proper determination of obviousness of claims 18-20 and 22 can be made. Therefore, it is respectfully submitted that claims 18-20 and 22 are also patentably distinct from Vo, Bharat, and Pulley.

In paragraph 37 of the Office Action, claim 23 was rejected as being obvious over Vo and Bharat in view of Matsliach. This rejection is traversed.

Claim 23 is dependent from independent claim 12, and thus all arguments raised above with respect to Vo and Bharat in connection with claim 12 equally applies to claim 23. Furthermore, Matsliach also fails to disclose or even suggest ranking web pages retrieved from Internet searches based upon the popularity of the retrieved web pages, where the popularity is determined based upon information extracted from packets traversing the Internet and is proportionate to the actual number of visits to the web pages as indicated by the extracted information, as recited in claims 12 from which claim 23 depends. In fact, the Examiner merely relied on Matsliach for the alleged disclosure of a counter for tracking

Internet usage, but Matsliach has nothing to do with ranking web pages retrieved from Internet searches based upon the popularity of the retrieved web pages as indicated by the information extracted from packets traversing the network.

The deficient disclosures of Vo, Bharat, and Matsliach preclude the Examiner from establishing even a *prima facie* basis from which a proper determination of obviousness of claim 23 can be made. Therefore, it is respectfully submitted that claim 23 is also patentably distinct from Vo, Bharat, and Matsliach.

In paragraph 38 of the Office Action, claim 24 was rejected as being obvious over Vo, Bharat, and Matsliach in view of Pulley. This rejection is traversed.

Claim 24 is dependent from claim 23, which is in turn dependent from independent claim 12, and thus all arguments raised above with respect to Vo and Bharat in connection with claims 12 and 23 and Matsliach with respect to claim 23 equally applies to claim 24. Furthermore, Pulley also fails to disclose or even suggest ranking web pages retrieved from Internet searches based upon the popularity of the retrieved web pages, where the popularity is determined based upon information extracted from packets traversing the Internet and is proportionate to the actual number of visits to the web pages as indicated by the extracted information, as recited in claims 12 from which claim 24 depends indirectly. In fact, the Examiner merely relied on Pulley for the alleged disclosure of incrementing a count only if a web page is visited by a client device having a distinct IP address, but Pulley has nothing to do with ranking web pages retrieved from Internet searches based upon the popularity of the retrieved web pages as indicated by the information extracted from packets traversing the network.

The deficient disclosures of Vo, Bharat, Matsliach, and Pulley preclude the Examiner from establishing even a *prima facie* basis from which a proper determination of obviousness of claim 24 can be made. Therefore, it is respectfully submitted that claim 24 is also patentably distinct from Vo, Bharat, Matsliach, and Pulley.

In paragraph 39-41 of the Office Action, claims 21 and 25 were rejected as being obvious over Vo, Bharat, and Matsliach in view of Sehm. This rejection is traversed.

Claims 21 is dependent from independent claim 12 and claim 25 is dependent from claim 23 which is in turn dependent from independent claim 12, and thus all arguments raised above with respect to Vo and Bharat in connection with claims 12 and 23 and Matsliach with respect to claim 23 equally applies to claims 21 and 25. Furthermore, Sehm also fails to disclose or even suggest ranking web pages retrieved from Internet searches based upon the popularity of the retrieved web pages, where the popularity is determined based upon information extracted from packets traversing the Internet and is proportionate to the actual number of visits to the web pages as indicated by the extracted information, as recited in claims 12 from which claims 21 and 25 depends directly or indirectly. In fact, the Examiner merely relied on Sehm for the alleged disclosure of discarding packets relating to invalid URLs or automatically generated packets, etc., but Sehm has nothing to do with ranking web pages retrieved from Internet searches based upon the popularity of the retrieved web pages as indicated by the information extracted from packets traversing the network.

The deficient disclosures of Vo, Bharat, Matsliach, and Sehm preclude the Examiner from establishing even a *prima facie* basis from which a proper determination of obviousness

of claims 21 and 25 can be made. Therefore, it is respectfully submitted that claims 21 and 25 are also patentably distinct from Vo, Bharat, Matsliach, and Sehm

In paragraphs 42-44 of the Office Action, claims 26 and 27 were rejected as being obvious over Vo and Bharat in view of McKeeth (US Patent Application Publication No. 2003/0105744). This rejection is traversed.

Claims 26 and 27 are dependent from independent claim 12, and thus all arguments raised above with respect to Vo and Bharat in connection with claim 12 equally applies to claims 26 and 27. Furthermore, McKeeth also fails to disclose or even suggest ranking web pages retrieved from Internet searches based upon the popularity of the retrieved web pages, where the popularity is determined based upon information extracted from packets traversing the Internet and is proportionate to the actual number of visits to the web pages as indicated by the extracted information, as recited in claim 12 from which claims 26 and 27 depend. In fact, the Examiner merely relied on McKeeth for the alleged disclosure of the detection of stale or unknown web pages, but McKeeth has nothing to do with ranking web pages retrieved from Internet searches based upon the popularity of the retrieved web pages as indicated by information extracted from packets traversing the network.

While McKeeth mentions the term “popularity” of a link, the popularity of a link in McKeeth is determined based upon the frequency of retrieval of the link by a search engine in response to a search request. See, e.g., McKeeth, paragraphs [0011] through [0014] and [0033] through [0036]. The “popularity” in McKeeth is not an indication of whether a web page was actually visited as determined based upon information extracted from packets traversing the Internet, and is not proportionate to the actual number of visits to the web

pages as indicated by the information extracted from the packets. Rather the “popularity of links” in McKeeth is merely an indication of how many times a search engine selects that link as a search result in response to user queries, or how many times a user accessed a document associated with a link, or how many times a site was visited as determined by a counter on that site. See, e.g., McKeeth, paragraphs [0011] through [0014] and [0033] through [0036].

In particular, such popularity of links in McKeeth is not determined from information extracted from the packets actually traversing the Internet, and is not proportionate to the actual number of visits to the web pages as indicated by such information extracted from the packets actually traversing the Internet. Because the popularity of links in McKeeth is merely determined based upon the information only from a particular search engine, it is impossible for the popularity of links in McKeeth to reflect how many times the link was selected in other search engines outside that particular search engine, and thus the popularity of the link in McKeeth would not be able to indicate the accurate, total number of times the link was selected by all search engines including other search engines outside this particular search engine. In contrast, the invention of claim 12 makes it possible to determine the true popularity of a web site that reflects the number of times the web site is visited by various Internet traffic even outside a particular search engine, because the popularity is determined based upon information extracted from the packets actually traversing the Internet, rather than from information in merely one particular search engine as in McKeeth.

In addition, because the popularity of links in McKeeth is determined based merely upon how many times a site was visited as determined by a counter on that particular site,

such popularity information would not be available to the search engine itself or other Internet entities external to that particular site, unless such popularity information is provided to the search engine or such other entities external to the site from the particular site that maintains the count. In contrast, the invention of claim 12 makes it possible to determine the popularity of a particular web site without having to obtain such popularity information from that particular web site or even communicating with that particular web site, because the popularity information is determined based upon information extracted from the packets actually traversing the Internet (external to that web site), rather than merely by a counter maintained at that particular web site.

The deficient disclosures of Vo, Bharat, and McKeeth preclude the Examiner from establishing even a *prima facie* basis from which a proper determination of obviousness of claims 26 and 27 can be made. Therefore, it is respectfully submitted that claims 26 and 27 are also patentably distinct from Vo, Bharat, and McKeeth.

In paragraph 45 of the Office Action, claim 28 was rejected as being obvious over Vo and Pulley. Claim 28 is canceled herein and thus this rejection is overcome.

In paragraph 46 of the Office Action, claim 29 was rejected as being obvious over Vo and Pulley in view of Slane (US Patent No. 6,279,140). Claim 29 is canceled herein and thus this rejection is overcome.

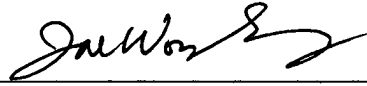
In paragraph 47 of the Office Action, claim 30 was rejected as being obvious over Vo and Pulley in view of Klinker (US Patent Application Publication No. 2002/0145981). Claim 30 is canceled herein and thus this rejection is overcome.

In conclusion, it is respectfully submitted that all pending claims 12-27, 38-41, 43, and 48 are in condition for allowance. Favorable action is solicited.

Respectfully Submitted,  
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